

Jobs After Apple: To NeXT and Beyond

After being stripped of all operational responsibilities on May 31, 1985, Jobs had little to do at Apple, so he began canvassing the country's colleges asking them to describe their ideal university computer. In early September, Jobs had lunch with Paul Berg, Nobel laureate and Stanford University biochemist. When Berg complained of the difficulty of performing "wet-lab" research on gene splicing, Jobs suggested simulating the experiments on a computer. Berg was supposedly so enthusiastic about the idea that Jobs realized he was onto something big. Within weeks Jobs decided to launch a startup with five other Apple employees: Susan Barnes (senior controller for U.S. sales and marketing), George Crow (engineering manager), Dan'l Lewin (higher education marketing manager), Rich Page (Apple Fellow), and Guy "Bud"-Tribble (manager of software engineering).

When Jobs announced his plans to Apple's board of directors, it initially expressed an interest in investing in the new venture, Next Inc. (later changed to NeXT Computer, Inc.), but the board went ballistic when Jobs revealed the names of the five employees who would be joining him. Jobs resigned as Apple chairman, and Apple sued him for dereliction of duties. Apple eventually dropped the suit in January 1986, when Jobs agreed to a six-month moratorium on hiring Apple employees. Curiously, Apple insisted on a non-compete clause that required any computers created by Jobs' new company to be more powerful than any of Apple's offerings.

Jobs was way off base when he originally predicted that NeXT would produce a machine by the spring of 1987. As it turned out, it wasn't until October 12, 1988, that Jobs unveiled the NeXT Computer to an eager crowd of 4,500 assembled at Louise M. Davies Symphony Hall in San Francisco. Even that was premature, because the final version of the NEXTSTEP operating system (originally called NeXTstep) didn't ship until September 18, 1989. Jobs, however, didn't see the NeXT Computer as late. He insisted it was "five years ahead of its time."

At the time he left Apple, Jobs owned roughly 6.5 million shares of stock, or about 11.3 percent of the company. Over the course of the year, Jobs began liquidating his massive holdings at what would prove to be fire-sale prices. According to Securities and Exchange Commission records, Jobs dumped 4.028 million shares in 1985 for \$70.5 million. By February 1986, Jobs claimed to have sold all but one share, so that he would still receive Apple's annual reports. Assuming this is true and that he managed to sell at the highest price realized by February, the most he could have grossed was \$135 million. As it turns out, Jobs couldn't have picked a worse time to sell his Apple stock.

To be sure, Jobs needed some seed money to buy Pixar and fund NeXT, but he could have made do with the proceeds from selling a small fraction of his Apple position (Pixar cost \$10 million and Jobs' initial investment in NeXT was just \$7 million). Jobs' assertion that he was selling because he had lost faith in Apple's executives was certainly valid. However, had he held on until the 2-for-1 split in April 1987, he would have owned 13 million shares, worth \$952 million when the stock reached its all-time high of \$73.25 on April 12, 1991. Including dividends, Jobs left over \$836 million on the table when he cashed out of Apple.

“Develop for it? I’ll piss on it.”

Bill Gates, Microsoft chairman, in response to InfoWorld’s Peggy Watt asking if Microsoft would develop applications for the NeXT Computer



Courtesy of NeXT Computer, Inc.

The NeXT Computer won glowing reviews, but poor market acceptance.

For the first four months of its life, NeXT operated out of Jobs’ Woodside mansion at 460 Mountain Home Road (the iron-gated entrance is actually on Robles Drive). The first formal offices were in the Stanford University Industrial Park in Palo Alto, not far from Xerox PARC. The company eventually moved to an office complex in Redwood City, where it remained until Apple purchased it in 1996.

The specifications certainly were impressive: 25MHz Motorola 68030 processor, 8MB of main memory expandable to 16MB, 250MB Canon optical disc drive, Motorola 68882 math coprocessor, and Motorola 56001 digital signal processor to drive real-time sound, array processing, modem, fax, and encryption functions. All this was housed in a cube 12 inches on each side, with a 17-inch Sony monochrome monitor, keyboard, and mouse. The NeXT Computer ran a Unix 4.3-based Mach operating system and featured a powerful object-oriented development environment. Also included on disc was the complete works of Shakespeare, a dictionary, a thesaurus, a book of quotations, the documentation, WriteNow, Mathematica, a relational database server, an artificial intelligence language, a C compiler, a personal information manager, and graphical electronic mail with integrated voice capabilities.

NeXT announced that it would sell the entire package direct to colleges and universities, which would in turn resell them to students and faculty for \$6,500. At the time, Apple’s top-of-the-line computer was the Mac Ix, with a 16MHz 68030 and a suggested retail price of \$7,769 for a stripped-down model.

When describing the NeXT Computer, the press never failed to make a big deal about the unique black matte finish of the 12-inch cube, calling it a bold new look. Actually, Jobs had his hand in designing

The Money Trail

NeXT began life in 1985 with a \$7 million stake from Jobs, but was operating at a ferocious burn rate that would leave it penniless by the end of 1986. Rather than dig into his own pockets again, Jobs distributed a prospectus throughout the venture capital community, which he had spurned when NeXT was founded. Now Jobs was only too willing to accept their investments. He sought \$3 million for a 10 percent stake in NeXT, giving the productless, revenueless NeXT a ludicrous \$30 million valuation. Not surprisingly, there were no takers.

As luck would have it, H. Ross Perot was watching television one night in November 1986 when he came across John Nathan's *The Entrepreneurs*, a documentary in which NeXT was featured. Perot was so fascinated by the young startup that he called Jobs the following day and casually remarked, "If you ever need an investor, call me." Not wanting to appear too eager, Jobs waited a week before inviting Perot to come take a look at his firm and meet its employees. Instead of focusing on the hard numbers, which would never stand up to due diligence, Jobs insisted Perot consider the intangibles. The approach appealed to Perot, who essentially opened his checkbook and asked Jobs how much he wanted.

Apparently Jobs was running a very special sale that day just for Texas billionaires. Jobs demanded \$20 million for 16 percent of NeXT, giving the firm an unbelievable valuation of \$125 million. In February 1987, Perot accepted without blinking and became the company's largest investor and a board member. "Do the math," said one venture capitalist, "and you have to assume that Perot is investing more out of emotion than prudence." Perot justified the price by responding, "I'm investing in quality."

Perot got a bargain compared to Canon. In June 1989, the Japanese conglomerate paid \$100 million for a 16.67 percent share of NeXT, giving the company an implicit value of \$600 million. By the time NeXT dropped its hardware in February 1993, Perot had trimmed his stake to 11 percent, leaving Canon with its 16.67 percent and Jobs as the majority shareholder with 46 percent of outstanding shares.

In 1994, NeXT reported its first yearly profit of \$1.03 million on revenues of \$49.6 million. By September 1995, Jobs claimed NeXT was consistently profitable. The following year, Goldman, Sachs & Company tried to take NeXT public, but the IPO never got off the ground. Just as well, since Apple would soon come knocking on the door with checkbook in hand (see "The Copland Crisis," page 225).

"He told me that we're going to hit one out of the ball park."

Steve Jobs, after future presidential candidate Ross Perot invested in NeXT

Nobody has ever accused Steve Jobs of frugality. When it came to choosing a logo for his new company, Jobs spared no expense. He met with four noted designers, but none was deemed worthy. Ultimately, Jobs decided he wanted 71-year-old Yale professor Paul Rand to design the NeXT logo. Widely considered the grand master of American graphic arts, Rand had previously designed logos for such business institutions as ABC, IBM, UPS, and Westinghouse. In fact, it was Rand who, in the 1960s, convinced International Business Machines to drop its full name and use only initials. Rand continued to consult for IBM, so initially he declined to work for Jobs, citing a conflict of interest. Amazingly enough, Jobs convinced IBM vice chairman Paul Rizzo to release Rand of his obligation.

Perhaps Rand had heard about how mercurial Jobs could be, because before accepting the commission, he insisted on being paid \$100,000 in advance to create only one design, and he would be under no obligation to revise his work if it failed to please Jobs. Jobs accepted the terms and in June 1986, Rand produced a logo reminiscent of a child's wooden block tilted at a precise 28° angle, bearing the letters of the company, each in a different color, perhaps inspired by artist Robert Indiana's *Love* painting that was popularized by a 1973 postage stamp.



The bizarre capitalization of the company's name was Rand's idea, who explained that the lower-case *e* would stand out and could represent "education, excellence, expertise, exceptional, excitement, e = mc²."

another black computer years ago. In the summer of 1981, Apple produced a special version of the Apple II for the audio-visual equipment manufacturer, Bell & Howell. It was distinguished from the standard Apple II by extra audio and video connectors on the back panel and its all-black plastic housing. Also interesting is that the same industrial design firm—Hartmut Esslinger's frogdesign (www.frogdesign.com)—responsible for the big, black NeXT Computer was also responsible for the sleek "Snow White" Apple IIc introduced in 1984.

Like the Macintosh before it, the NeXT Computer took longer than expected to develop, was more expensive than originally hoped for, used a non-standard disk drive, and did not have a color display. Nonetheless, the initial press reaction was enormously favorable. Stewart Alsop, editor of *P.C. Letter*, predicted that NeXT would sell 25,000 machines in 18 months. Michael Murphy, editor of *California Technology Stock Letter*, went one better in predicting that NeXT would sell 50,000 machines in two years. Louise Kohl, executive editor at *MacUser*, predicted, "This machine will replace sex."

When all the hoopla of the introduction faded, it became apparent that higher education just didn't see things the same way as the fawning press. The NeXT Computer didn't deliver what the educators had asked for. It was too expensive to be a personal computer and too underpowered to be a workstation, leading NeXT's marketing staff to invent the term "personal workstation" so that it could claim to be a leader in a market segment that heretofore didn't exist.

As soon as it became apparent that NeXT wasn't going to be successful selling only to higher education, it struck a deal with Businessland, giving the nation's largest computer retailer the rights to sell 100,000 machines in three years. At the March 1989 announcement, Businessland's chairman, president, and CEO David Norman boldly predicted, "NeXT revenues will be as much over the next twelve months as Compaq was over the last twelve months. Compaq business was about \$150 million."

Considering that Businessland would sell the computer for \$9,995 with absolutely no discounting, Norman's boast worked out to roughly 10,000 machines, plus peripherals, in the coming year. While that may not seem like an unrealistic goal, consider that toward the end of 1988, NeXT was selling a pathetic 400 machines a month at the educator's price of \$6,500. Oblivious to the clear signals the marketplace was sending, NeXT's head of manufacturing was ramping up the factory to produce 120,000 computers annually.

Humbled by the underwhelming response to the NeXT Computer, Jobs and company set about addressing some of the major complaints about its speed, price, lack of color, hard drives, and floppies. On September 18, 1990, NeXT introduced four new workstations based on the brand-new, 25MHz Motorola 68040 processor. The \$4,995 NeXTstation, or “slab,” was shaped like a pizza box and contained a 2.88MB, 3.5-inch floppy disk drive, a 105MB hard disk, 8MB of memory expandable to 32MB, and a monochrome monitor.

Courtesy of NeXT Computer, Inc.



“We knew we’d either be the last hardware company that made it or the first that didn’t, and we were the first that didn’t.”

Steve Jobs, on NeXT’s aborted computer efforts

The NeXTstation addressed many of the faults of its predecessor, but still failed to find a market.

The \$7,995 NeXTstation Color came with a 16-inch MegaPixel Trinitron monitor capable of displaying 4,096 colors, a sound box, and memory expandable from 12MB to 32MB. The \$7,995 NeXTcube, housed in a case similar to the original NeXT Computer, came standard with the same display, memory, and disk configuration as the NeXTstation, but since it was designed to be a network server, it offered more expansion possibilities in those areas. For an additional \$3,995, users

“We also need an alternative to Microsoft in the systems-software area. And the only hope we have for that, in my opinion, is NeXT.”

Steve Jobs

“I think Ross would be an excellent president. I think he’s got a real chance and I’m helping him every way I can.”

Steve Jobs, commenting on Perot's failed 1992 bid for the U.S. presidency

“In my 20 years in this industry, I have never seen a revolution as profound as [object-oriented programming]. You can build software literally 5 to 10 times faster, and that software is much more reliable, much easier to maintain and much more powerful.”

Steve Jobs

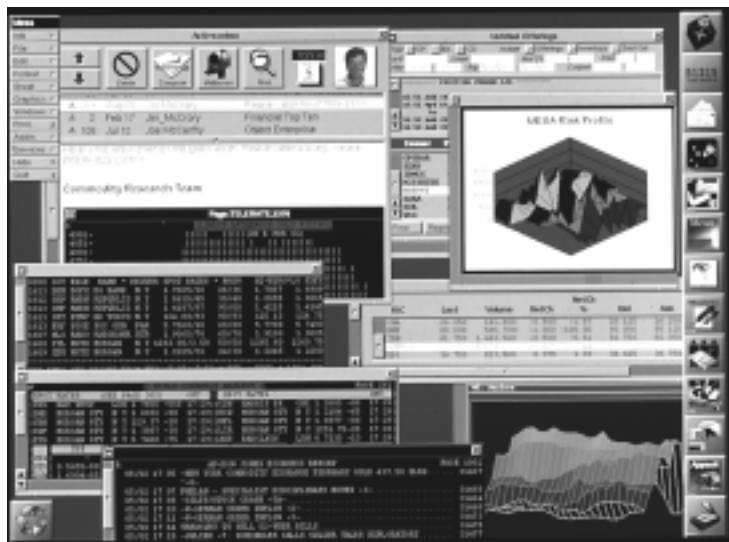
“All software will be written using this object technology someday. No question about it.”

Steve Jobs

could add the 32-bit NeXTdimension video board giving the NeXTcube 16.7 million colors in Display PostScript. In comparison, the best Apple had to offer at the time was the \$8,969 Mac IIfx with a 40MHz 68030.

To outward appearances, NeXT was on a roll, but looks were deceiving. The '040-based machines didn't ship for months after their introduction due to a shortage of the new processors from Motorola. Furthermore, the NeXTdimension's compression chip was abandoned by its third-party developer, leaving an empty socket on the board and a bad taste in the mouths of true believers who had spent almost \$12,000 for the high-end color system. In April 1991, one of the founders, Susan Barnes, called it quits. Then on May 14, NeXT was forced to terminate its March 1989 sales agreement with Businessland because the retailer closed its outlets. To make matters worse, the firm's highly respected outside investor, H. Ross Perot, resigned from the board of directors in June, complaining that “I shouldn't have let you guys have all that money. Biggest mistake I made.”

At the first NeXTWORLD Expo held in San Francisco on January 22, 1992, Jobs announced cheaper, faster, “Turbo” versions of the NeXTstation, NeXTstation Color, and NeXTcube, all built around the 33MHz Motorola 68040 processor. More significantly, he announced NEXTSTEP 3.0 and NEXTSTEP 486, a \$995 version that would run on Intel 80486 processors simultaneously with Unix, MS-DOS, and



Courtesy of NeXT Computer, Inc.

By 1992, NeXT was pinning its hopes on its NEXTSTEP object-oriented operating system for Intel-based computers.

Windows. NEXTSTEP 3.0 was to ship in the second quarter of 1992, but didn't make it out the door until late September. NEXTSTEP 486 was originally promised for September, but didn't ship until May 1993. By then the name had changed to NEXTSTEP For Intel Processors, since it could run on both 486 and Pentium machines.

With \$250 million down the tubes, Jobs realized he could never reproduce the magic necessary to create Silicon Valley's next Apple Computer, so he decided to shoot for becoming the next Microsoft. On February 10, 1993—"Black Tuesday"—NeXT laid off 280 of its 530 employees and announced it would sell the hardware side of its business to Canon so that it could focus on selling NEXTSTEP For Intel Processors as the premier object-oriented operating system for Intel-based computers.

Like an Erector set, object-oriented programming allows corporations to build large, complex custom applications using small, off-the-shelf objects, each designed to do specific tasks. While NEXTSTEP was widely considered to be a fabulous product, the market was not without competition. Microsoft's own object-oriented version of Windows NT (code-named Cairo) was released in 1994, and both IBM and Apple had high hopes for Pink, the operating system under development at their joint venture, Taligent. Pink never saw the light of day and dropped out of contention on December 19, 1995, when Taligent was absorbed into IBM as a wholly owned subsidiary. Windows NT, on the other hand, went on to great success in the enterprise market. The proprietary NEXTSTEP evolved into an open operating system called OPENSTEP, jointly developed with Sun Microsystems, but never found much acceptance outside of very small niche markets such as financial services. As a result, in the spring of 1996, NeXT began shifting its focus to an Internet development tool called WebObjects, which proved moderately successful.

Although his hardware failures had tarnished his image as Silicon Valley's golden boy, few people were willing to write off Jobs altogether, and many secretly wished he could pull off another miracle to match the Mac. Their wishes came true as 1996 drew to a close and Jobs orchestrated the redemption of NeXT with his triumphant return to Apple Computer (see "The Copland Crisis," page 225).

"You can have a good product with a lot of good philosophical thinking behind it—a lot of pureness—and still not sell. You gotta have some luck, too. The NeXT is a good machine that just didn't have the luck to make it successful."

Steve Wozniak

It took Apple only 73 days to sell 50,000 Macintosh computers. It took Jobs seven years to sell as many NeXT computers.

Alan Kay, then an Apple Fellow, first brought Pixar to Jobs' attention in 1984 when Lucas was trying to sell the division. In May 1985, Jobs tried to convince Apple's board of directors to purchase Pixar, but he found "no one else there was interested."

"We believe it's the biggest advance in animation since Walt Disney started it all with the release of *Snow White* 50 years ago."

Steve Jobs, discussing Toy Story

"The fact that [Jobs has] defied history, allowing lightning to strike twice—first with Apple and now at Pixar—really solidifies our view of him as a visionary."

*Creative Strategies Consulting
president Tim Bjarin*

Pixar

On February 7, 1986, Steve Jobs paid \$10 million for a majority interest in Pixar (www.pixar.com), the computer division of LucasFilm Ltd., the creator of *Star Wars* and other blockbuster movies. At the time of Jobs' purchase, Pixar had 43 employees, and while Jobs took the title of chairman, he did not draw a salary nor involve himself in the day-to-day affairs of the firm.

Pixar's main product in 1986 was a computer that processed 3D graphics at a speed of 40 million instructions per second. It was originally intended for sale to other computer makers for integration into their systems. At the time, president Edwin Catmull admitted the demand for the \$120,000 machine among entertainment companies "is minuscule," yet Jobs believed, "image computing will explode during the next four years, just as supercomputing has become a commercial reality during the last several years."

Jobs asked Catmull to focus on developing technical products that could begin to generate revenue quickly. For many years, Pixar's main source of revenue was RenderMan, a program that allowed computer graphic artists to apply textures and colors to the surfaces of 3D objects. Running on Silicon Graphics workstations, RenderMan was used to create the dinosaurs for *Jurassic Park*. Pixar sold about 100,000 copies of RenderMan, but Jobs wanted Pixar to focus on developing content in the form of short films (*Tin Toy* won an Oscar in 1988) and television commercials (such as the animated Listerine spots).

In 1991, Pixar pitched Walt Disney Company on an hour-long computer-animated special. Disney shocked Pixar by asking for a full-length feature movie instead. On May 3, 1991, a deal was struck for three feature films, with Disney maintaining control over marketing and licensing, and Pixar creating the screenplays, for which it would receive a percentage of the box office gross revenues and video sales. Pixar wouldn't see a penny from merchandising, and that's where the real money comes from nowadays.

Jobs pumped at least \$50 million into Pixar over the years. "If I knew in 1986 how much it was going to cost to keep Pixar going, I doubt if I would have bought the company," admits Jobs. He invested far more money in Pixar than NeXT. In late 1994, Jobs contemplated selling the profitless Pixar to Microsoft. Instead, Microsoft paid \$6.5 million for a patent license, helping Pixar turn in its first profitable quarter. Although Pixar had accumulated a net deficit of \$46.9 million by September 30, 1995, its fortunes were about to improve significantly.

Pixar's proprietary 3D animation technology made possible the first feature-length computer-generated film, Walt Disney Company's *Toy Story*. Pixar's 140 employees spent four years writing the screenplay, directing, staging, filming, editing, and producing *Toy Story* on 70 Silicon Graphics and 117 Sun Microsystems computers (total cost: \$6 million in hardware), while Disney handled the financing, marketing, and distribution. *Toy Story* was released on November 22, 1995, and generated over \$184 million in domestic box office revenues, making it the third most successful animated feature film ever, surpassed by only two other Disney titles: *The Lion King* and *Aladdin*.

Taking advantage of all the publicity surrounding the release of *Toy Story*, Pixar Animation Studios sold 6.9 million shares of stock to the public on November 29. Originally priced at \$22 a share, Pixar (which trades on NASDAQ under the symbol PIXR) began trading at \$47, hit a high of \$49.50, and closed at \$39 on volume of 4.8 million shares. Jobs' 30 million shares was suddenly worth an astonishing \$1.17 billion on paper, more than the value of his Apple stock at any time during his tenure in Cupertino. The stock subsequently slid to a low of \$12.25 during the third quarter of 1996, and peaked at \$66 a share in July 1998, returning Jobs to the status of billionaire.

Following the success of *Toy Story*, Jobs renegotiated the deal with Disney so that Pixar could participate financially in the merchandising revenues. Initially Pixar's Interactive Division released CD-ROM games based upon the movie, but following the new deal with Disney, the consumer software division was dissolved on March 31, 1997, and its workers reassigned to work on *A Bug's Life*, which was released on November 25, 1998 to rave reviews and pulled in a record-setting \$46.1 million over the five-day weekend, breaking the previous Thanksgiving weekend record of \$45 million set by Disney's *101 Dalmations* (live-action) in 1996. *Toy Story 2*, the sequel to the 1995 blockbuster, was originally planned as a direct-to-video release, but Pixar and Disney reconsidered and expect it to be in theaters for the 1999 holiday season.

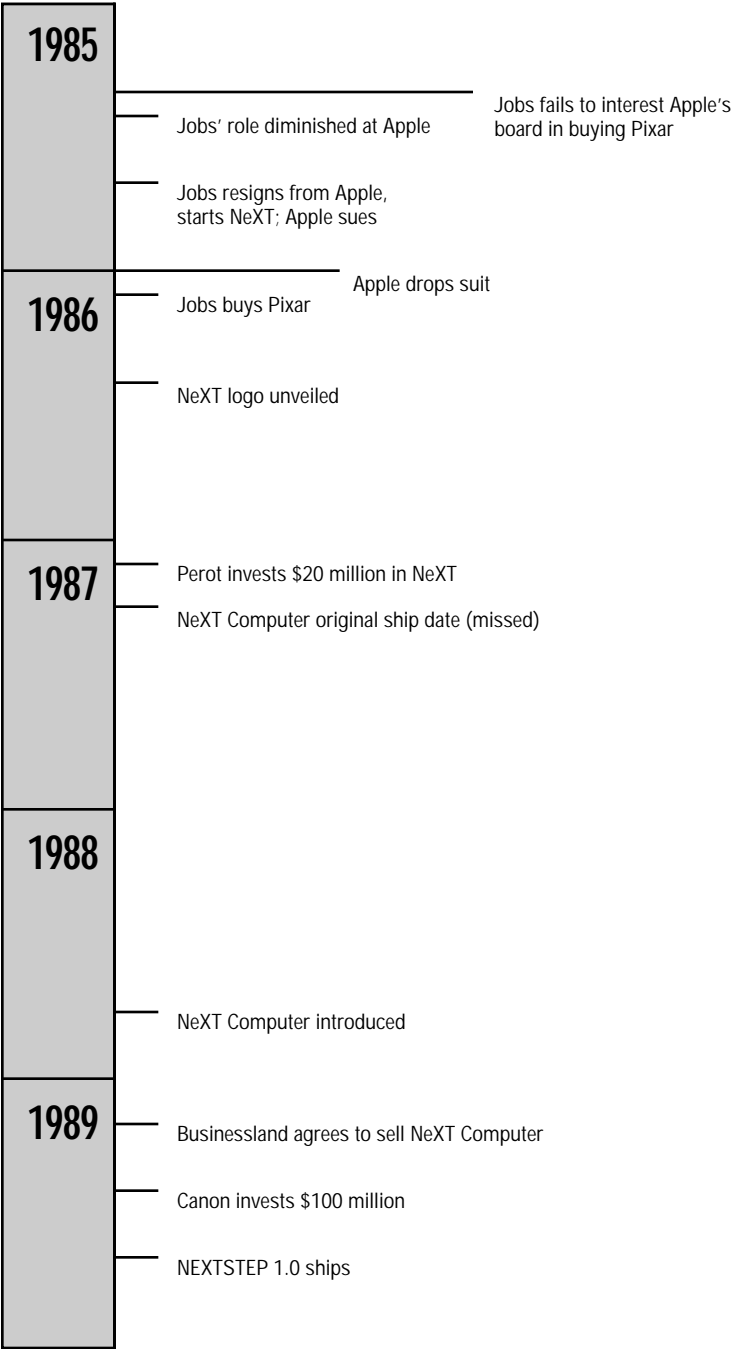
At 24 frames per second, a 77-minute animated feature film such as *Toy Story* requires approximately 110,000 individual frames.

"It's something between ironic and moronic that Jobs hit his biggest jackpot with the company where he is the least involved."

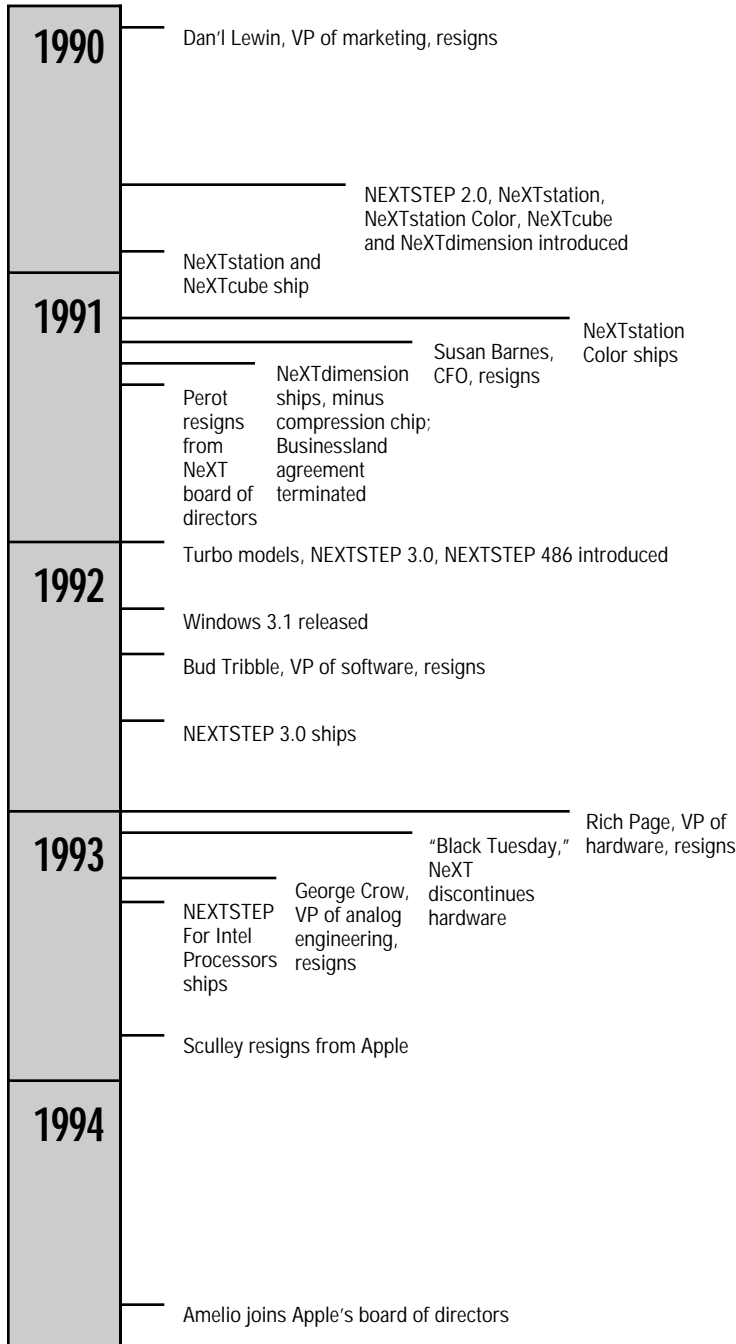
PC Letter *editor David Coursey*

NeXT Timeline

“Without Jobs, Apple is just another Silicon Valley company, and without Apple, Jobs is just another Silicon Valley millionaire.”
Technology journalist Nick Arnett



NeXT Timeline (continued)



After leaving NeXT, Dan'l Lewin worked at GO and KidSoft. As of 1998, he was president of Aurigin Systems (www.smartpatents.com), a startup selling software that enables organizations to uncover and use patent data for strategic business decisions.

"Medicine will cure death and government will repeal taxes before Steve will fail. You can quote me."

Former Apple evangelist Guy Kawasaki, explaining to NeXTWORLD in the fall of 1991 why NeXT will eclipse Sun Microsystems as the dominant workstation manufacturer

NeXT Timeline (continued)

“There are a lot of people who do one incredible thing and then we never hear from them again. J. D. Salinger wrote *Catcher in the Rye*, but what else has he done?”

*Former controller of the Mac division
Deborah Coleman, on Jobs*

